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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/611,021	07/06/2000	Ki-Hyun Kim	678-504 (P9383)	4959

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EXAMINER

SHARMA, SUJATHA R

ART UNIT

PAPER NUMBER

2684

DATE MAILED: 11/14/2003

10

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/611,021

Applicant(s)

KIM ET AL.

Examiner

Sujatha Sharma

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4,6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Till [US 6,374,089] in view of Peherson [US 6,314,183].

Regarding claims 1,6,7, Till discloses a wireless communication device such as cellular telephones that have portion of the housing rotate about one or more hinge points to selectively cover or uncover the keypad, display etc. Till an opening/closing device in the main body and operative to rotate so as to displace the sub-body and main body relative to one another at an opening angle defined between the open and closed positions of the sub-body (see Figs. 1-3, summary of invention, col. 2, lines 47-63,col. 4, lines 48-66). Till further discloses a switch for driving the opening/closing device (see col. 5, lines 43-47). Till further discloses motor control electronics which control the operation of the motor to perform the opening/closing action of the flip cover (see Figs. 1-3, summary of invention, col. 2, lines 47-63, col. 3, lines 39-49, col. 4, lines 48-66).

Till, however does not disclose a detector to detect the opening angle of the opening/closing device and generate a signal to send to the motor controller.

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Peherson, in the same field of endeavor, teaches the use of a detector (34 in fig.1) to detect the opening angle and a controller for controlling the rotation of opening/closing to a pre-determined angle. See summary of invention and column 3, lines 1-62.

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to provide the above teachings of Peherson to Till to facilitate and control the automatic opening/closing of the sub-body over the main body of the mobile phone such as to prevent any damage to the motor.

Regarding claim 2, Till discloses the opening closing device to comprise of a hollow module housing with a through hole performed at one end thereof and a decelerating module fixedly inserted in the module housing and including a gear train and a sub-body coupler operatively attached to the gear train fixed to an end of a driving module of the decelerating module, a part of the sub-body coupler projecting from the through hole of the module housing and being fixed to a side of the sub-body. See Figs 2-4, col. 3, line 10- col. 4, line 66, col. 5, line 41- col. 6, line 56.

Regarding claim 3, Till further discloses a driving motor in the decelerating module and a decelerating device coupled to the driving motor for reducing the number of rotations and increasing the driving force of the driving motor. See summary of invention, col. 3, line 10- col. 4, line 66, col. 5, line 41- col. 6, line 12.

Regarding claim 4. Pehersson discloses the use of magnet sensor for detecting the position of the movable element in relation to the apparatus housing. See abstract and summary of invention.

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Regarding claim 8, Till further discloses the decelerating device to comprise of a reduction gear assembly rotatably coupled to the driving motor and a driving shaft rotatably fixed to the reduction gear assembly to rotate at a rotational speed which is lower than a rotational speed of the driving motor (see figs. 2-4, summary of invention, col. 5, lines 58- col. 6, line 12)

3. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Till [US 6,374,089] and Peherson [US 6,314,183] in view of Wohl [WO 92/09163]

Regarding claim 5, the modified Till as treated in claim 1 does not disclose the method of using a light/photo sensor to detect the opening/closing of the sub-body.

Wohl in the same field of endeavor teaches the use of sensor that lightens the keypad and display when the flip cover moved from its closed position to its open or extended position. See abstract and summary of invention.

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to include the above teachings of Wohl in the modified Till's device in order for the mobile telephone to detect the position of the flip cover relative to the main housing and accordingly provide the on-hook/off-hook condition.

Response to Arguments

4. Applicant's arguments with respect to claims 1-7 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Wilcox [US 5,649,309] Wireless communication device having axially aligned cover release mechanism.

Pan [US 2001/0039193] Sensor for detecting the state of a cover of a cellular phone.

Lim [US 6,628,974] Folder operating apparatus for cellular phone.

Lee [US 6,131,042] Combination cellular phone radio receiver and recorder mechanism for vehicles.

Paek [EP 1 009 104 A2] Wireless telephone capable of automatically opening a flip.

Norman [US 6,073,027] Portable radiotelephone with sliding cover and automatic antenna extension.

Nagai [US 6,615,08] Portable phone device.

Boesen [US 6,542,721] Cellular telephone personal digital assistant and pager unit.

Takagi [US 5,636,275] Hinge mechanism and foldable and portable telephone having hinge mechanism.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37


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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sujatha Sharma whose telephone number is 703-305-5298. The examiner can normally be reached on Mon-Fri 7.30am - 4.00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 703-308-7745. The fax phone numbers for the organization where this application or proceeding is assigned and for all official communications is 703-872-9306

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3800.


Sujatha Sharma
November 4, 2003


NAY MAUNG
SUPERVISORY PATENT EXAMINER